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## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference NAI1P023.P	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US02/23811	International filing date (day/month/year) 25 July 2002 (25.07.2002)	Priority date (day/month/year) 26 July 2001 (26.07.2001)
International Patent Classification (IPC) or national classification and IPC IPC(7): G06F 15/16 and US Cl.: 709/206, 207		
Applicant NETWORKS ASSOCIATES TECHNOLOGY, INC.		
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>0</u> sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of <u>0</u> sheets.</p>		
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of report with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>		
Date of submission of the demand 26 February 2003 (26.02.2003)	Date of completion of this report 09 July 2003 (09.07.2003)	
Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703)305-3230	Authorized officer Ayaz R Sheikh <i>for James R. Matthews</i> Telephone No. 703-305-3900	

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.  
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## I. Basis of the report

### 1. With regard to the elements of the international application:\*

☐ the international application as originally filed.

☒ the description:

pages 1-15 as originally filed

pages NONE, filed with the demand

pages NONE, filed with the letter of \_\_\_\_\_.

☒ the claims:

pages NONE, as originally filed

pages NONE, as amended (together with any statement) under Article 19

pages NONE, filed with the demand

pages 16-21, filed with the letter of 12 May 2003 (12.05.2003)

☒ the drawings:

pages 1-8, as originally filed

pages NONE, filed with the demand

pages NONE, filed with the letter of \_\_\_\_\_.

☐ the sequence listing part of the description:

pages NONE, as originally filed

pages NONE, filed with the demand

pages NONE, filed with the letter of \_\_\_\_\_.

### 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

### 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained in the international application in printed form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

### 4. ☒ The amendments have resulted in the cancellation of:

☐ the description, pages NONE

☒ the claims, Nos. 1-21

☐ the drawings, sheets/fig NONE

### 5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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## V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. STATEMENT

Novelty (N)	Claims <u>1-12</u>	YES
	Claims <u>NONE</u>	NO
Inventive Step (IS)	Claims <u>NONE</u>	YES
	Claims <u>1-12</u>	NO
Industrial Applicability (IA)	Claims <u>1-12</u>	YES
	Claims <u>NONE</u>	NO

### 2. CITATIONS AND EXPLANATIONS

Please See Continuation Sheet

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## Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

### V. 2. Citations and Explanations:

1. Claims 1-3 and 6-10 lack an inventive step under PCT Article 33(3) as being obvious over McCormick et al. (US 6023723 A) in view of Birrell et al. (US 6092101 A).

As per claims 1 and 11, McCormick teaches a method (see abstract) and computer program product (see col.3, lines 27-35) for detecting an unwanted electronic mail message, comprising: receiving user input via a graphical user interface (see Fig.2; col.3, lines 38-39; and col.4, lines 7-13), the user input including indicators of unwanted electronic mail messages, wherein the indicator for a particular unwanted message includes at least one of a URL, a sender, and domain of a sender (see col.2, lines 44-49; and col.3, lines 45-51), the graphical user interface further including a window for displaying to a user all of the text of the entire particular unwanted message (see col.5, lines 58-60 and col.4, lines 26-30) and permitting the user to highlight text of the particular unwanted message in the window (see Fig.2; and col.5, line 56 to col.6, line 10), a menu including the highlighted text for selecting at least one of the measurements to apply to the highlighted text, and a button for adding the selected measurements to the indicators (see Fig.2; col.3, line 63 to col.4, line 6; and col.5, lines 15-20); storing the user input indicators in a database (see col.4, lines 51-56); receiving an electronic mail message prior to delivery of the electronic mail message to an intended recipient of the electronic mail message (see col.2, lines 47-50); analyzing the electronic mail message using the user input indicators stored in the database (see col.3, lines 48-51; and col.4, lines 20-25); classifying the electronic mail message as unwanted, possibly unwanted, and wanted based on the analysis using the user input indicators stored in the database and the analysis using data collected from an archive of known unwanted messages (see col.4, lines 20-56); sending the electronic mail message to the intended recipient if the electronic mail message is not determined to be unwanted (see col.4, lines 26-29); and selecting a disposition of the electronic mail message if the electronic mail message is determined to be unwanted, the disposition including at least one of: not delivering the electronic mail message to the intended recipient, sending the electronic mail message to an administrator, and sending the electronic mail message to a quarantine (see col.4, lines 20-25). McCormick does not explicitly teach of a list of a plurality of measurements, wherein the measurements each correspond to a unique specific condition associated with the highlighted text that must be met before an electronic mail is to be classified as unwanted. Birrell teaches of a list of a plurality of measurements, wherein the measurements each correspond to a unique specific condition associated with the highlighted text that must be met before an electronic mail is to be classified as unwanted (see col.1, line 64 to col.2, line 12; col.10, lines 2-13; and col.13, lines 3-42). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Birrell within the system of McCormick by implementing unique specific conditions (measurements) within the text for querying the electronic message before classifying within the unwanted email detection method and program because McCormick teaches that "complex queries" can be performed by "perhaps intermixing conditions about messages" (see col.10, lines 2-4).

As per claim 2, McCormick further teaches wherein the measurements to apply to the highlighted text are selected from the menu utilizing a right-click action of a mouse and a pop-up window (see col.5, line 39 & line 65 to col.6, line 1).

As per claim 3, McCormick further teaches wherein the measurements include a plurality of instances of the highlighted text (see col.4, lines 3-6; and col.5, line 65 to col.6, line 10).

As per claim 6, McCormick further teaches wherein the graphical user interface is further adapted to allow review of the measurements (see abstract).

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As per claim 7, McCormick does not explicitly teach wherein the graphical user interface includes an applet. Birrell teaches wherein the graphical user interface includes an applet (see col.2, lines 56-63). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Birrell within the system of McCormick by implementing a GUI including applets within the unwanted email detection method because McCormick teaches that the system is implementing using a web server via the Internet, thus one of ordinary skill in the art would employ the GUI to be a browser which incorporate applets as taught by Birrell.

As per claim 8, McCormick further teaches wherein the graphical user interface is displayed in response to the selection of a uniform resource locator (see col.6, lines 11-14).

As per claim 9, McCormick further teaches wherein the uniform resource locator is included in an electronic mail message sent to the user (see Fig.2; and col.5, lines 61-62).

As per claim 10, McCormick further teaches wherein the electronic mail message including the URL is sent to the user in response to the submission by the user of an electronic mail message determined to be unwanted (see col.4, lines 38-42).

2. Claims 4 and 5 lack an inventive step under PCT Article 33(3) as being obvious over McCormick et al. (US 6023723 A) and Birrell et al. (US 6092101 A), and further in view of Miller (US 5805911 A).

As per claim 4, McCormick and Birrell do not teach wherein the measurements include a count of a number of instances of the highlighted text. Miller teaches wherein the measurements include a count of a number of instances of the highlighted text (see col.10, lines 53-58). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Miller within the system of McCormick and Birrell by counting the number of instances of a particular text within the unwanted email detection method because McCormick already teaches that text can be used to either accept or discard e-mails, thus by implementing an instance counter, one of ordinary skill in the art would be able to filter e-mails not only by the text inputted, but also by the amount of frequency of the text used within the e-mail.

As per claim 5, McCormick and Birrell do not teach wherein the measurements include a ratio of the highlighted text with respect to a total number of words. Miller teaches wherein the measurements include a ratio of the highlighted text with respect to a total number of words (see col.11, lines 4-7). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Miller within the system of McCormick and Birrell by measuring the ratio of the text with respect to a total number of words within the unwanted email detection method because McCormick already teaches that text can be used to either accept or discard e-mails, thus by implementing a ratio of frequency with respect to total number of words, one of ordinary skill in the art would be able to filter e-mails not only by the text inputted, but also by the amount of frequency of the text used within the e-mail.

3. Claim 12 lack an inventive step under PCT Article 33(3) as being obvious over McCormick et al. (US 6023723 A) in view of Miller (US 5805911 A), Birrell et al. (US 6092101 A), and Parry et al. (US 6047277 A). McCormick teaches a method (see abstract) for detecting an unwanted electronic mail message, comprising: receiving user input via a graphical user interface (see Fig.2; col.3, lines 38-39; and col.4, lines 7-13), the user input including indicators of unwanted electronic mail messages, wherein the indicator for a particular unwanted message includes at least one of a URL, a sender, and domain of a sender (see col.2, lines 44-49; and col.3, lines 45-51), the graphical user interface further including a window for displaying to a user all of the text of the entire particular unwanted message (see col.5, lines 58-60 and col.4, lines 26-30) and permitting the user to highlight text of the particular unwanted message in the window (see Fig.2; and col.5, line 56 to col.6, line 10), a menu including the highlighted text for selecting at least one of the measurements to apply to the highlighted text, and a button for adding the selected measurements to the indicators (see Fig.2; col.3, line 63 to col.4, line 6; and col.5, lines 15-20), the graphical user interface further adapted to allow the user to review the measurements (see abstract), the measurements to apply to the highlighted text being selected from the menu utilizing a right-click action of a mouse (see col.5, line 65 to col.6, line 1), the measurements including the existence of a plurality of instances of the highlighted text, a count of the number of instances of the highlighted text (see claim 4 rejection above), a ratio of the highlighted text with respect to a total number of words (see claim 5 above), the graphical user interface including an applet displayed (see claim 7 rejection above) in response to the selection of a uniform resource locator included in an electronic mail message (see col.6, lines 11-14) sent to the user in response to the submission by the user of an electronic mail message determined to be unwanted; storing the user input indicators in a database (see col.4, lines 57-62 and col.5, lines 15-23); receiving an electronic mail message prior to delivery of the electronic mail message to an intended recipient of the electronic mail message (see col.2, lines 47-50); analyzing the electronic mail message using the user input indicators stored in the database (see col.3, lines 48-51; and col.4, lines 20-25); analyzing the electronic mail message using data collected from a public archive of known unwanted messages (see col.2, lines 60-64; col.3, lines 54-56); classifying the electronic mail message as unwanted, possibly unwanted, and wanted based on the analysis using the user input indicators stored in the database, the analysis using data collected from an archive of known unwanted messages (see col.4, lines 20-56); sending the electronic mail message to the intended recipient if the electronic mail message is not determined to be unwanted; selecting a disposition of the electronic mail message if the electronic mail message is determined to be unwanted, the disposition selected from the group including not delivering the electronic mail message to the intended recipient, sending the electronic mail message to an administrator, and sending the electronic mail message to a quarantine (see col.4, lines 20-25); and allowing configuration of analysis parameters while simultaneously performing the analyses (see col.4, line 57 to col.5, line 8; and col.7, lines



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40-51).

McCormick does not explicitly teach of a list of a plurality of measurements, wherein the measurements each correspond to a unique specific condition associated with the highlighted text that must be met before an electronic mail is to be classified as unwanted. Birrell teaches of a list of a plurality of measurements, wherein the measurements each correspond to a unique specific condition associated with the highlighted text that must be met before an electronic mail is to be classified as unwanted (see col.1, line 64 to col.2, line 12; col.10, lines 2-13; and col.13, lines 3-42). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Birrell within the system of McCormick by implementing unique specific conditions (measurements) within the text for querying the electronic message before classifying within the unwanted email detection method and program because McCormick teaches that "complex queries" can be performed by "perhaps intermixing conditions about messages" (see col.10, lines 2-4).

McCormick does not teach that the user input being encrypted at least in part. Birrell teaches that the user input being encrypted at least in part (see col.4, lines 5-9). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Birrell within the system of McCormick by employing an encryption mechanism within the unwanted email detection method because McCormick teaches that the system is implementing using a web server via the Internet, thus to ensure security via the Internet, one of ordinary skill in the art would employ an encryption mechanism such as a firewall.

McCormick does not teach analyzing the electronic mail message using a neural network engine by: gathering statistics associated with the text using a statistical analyzer by analyzing a character type including Unicode, teaching the neural network engine coupled to the statistical analyzer to recognize unwanted messages based on statistical indicators, wherein the teaching of the neural network engine includes identifying a message as an unwanted message, the features of the message that make the message unwanted are identified, and the identified features are stored and used by the neural network engine to identify subsequent unwanted messages, and analyzing the statistical indicators utilizing the neural network engine. Parry teaches of a neural network engine that analyzes text messages (see col.2, lines 24-35) by: gathering statistics associated with the text using a statistical analyzer (see col.3, lines 39-45) by analyzing a character type including Unicode (see col.4, lines 17-21), teaching the neural network engine coupled to the statistical analyzer to recognize unwanted messages based on statistical indicators, wherein the teaching of the neural network engine includes identifying a message as an unwanted message, the features of the message that make the message unwanted are identified, and the identified features are stored and used by the neural network engine to identify subsequent unwanted messages, and analyzing the statistical indicators utilizing the neural network engine (see Fig.5; col.3, lines 15-51; and col.7, line 43 to col.8, line 25). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Parry within the system of McCormick by implementing a neural network within the unwanted email detection method because Parry teaches that the raw text data can be an Internet resource such as an e-mail (see col.4, lines 12-14) and McCormick teaches of unwanted junk e-mails.

## ----- NEW CITATIONS -----

US 5,805,911 A (MILLER) 08 September 1998, see col.10, line 53 to col.11, line 7.

US 6,023,723 A (MCCORMICK et al) 08 February 2000, see col.2 to col.6.

US 6,047,277 A (PARRY et al) 04 April 2000, see fig.5, col.2, line 24 to col.4, line 21, and col.7, line 43 to col.8, line 25.

US 6,092,101 A (BIRRELL et al) 18 July 2000, see col.2, lines 56-63 and col.4, lines 5-9

CLAIMS

What is claimed is:

1. A method for detecting an unwanted electronic mail message, comprising:  
receiving user input via a graphical user interface, the user input including indicators of unwanted electronic mail messages, wherein the indicator for a particular unwanted message includes at least one of a URL, a sender, and domain of a sender, the graphical user interface further including a window for displaying to a user all of the text of the entire particular unwanted message and permitting the user to highlight text of the particular unwanted message in the window, a menu including the highlighted text and a list of a plurality of measurements for selecting at least one of the measurements to apply to the highlighted text, and a button for adding the selected measurements to the indicators, wherein the measurements each correspond to a unique specific condition associated with the highlighted text that must be met before an electronic mail message is to be classified as unwanted;  
storing the user input indicators in a database;  
receiving an electronic mail message prior to delivery of the electronic mail message to an intended recipient of the electronic mail message;  
analyzing the electronic mail message using the user input indicators stored in the database;  
classifying the electronic mail message as unwanted, possibly unwanted, and wanted based on the analysis using the user input indicators stored in the database;  
sending the electronic mail message to the intended recipient if the electronic mail message is not determined to be unwanted; and  
selecting a disposition of the electronic mail message if the electronic mail message is determined to be unwanted, the disposition selected from the group consisting of not delivering the electronic mail message to

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the intended recipient, sending the electronic mail message to an administrator, and sending the electronic mail message to a quarantine.

2. The method as recited in claim 1, wherein the measurements to apply to the highlighted text are selected from the menu utilizing a right-click action of a mouse and a pop-up window.
3. The method as recited in claim 1, wherein the measurements include a plurality of instances of the highlighted text.
4. The method as recited in claim 1, wherein the measurements include a count of a number of instances of the highlighted text.
5. The method as recited in claim 1, wherein the measurements include a ratio of the highlighted text with respect to a total number of words.
6. The method as recited in claim 1, wherein the graphical user interface is further adapted to allow review of the measurements.
7. The method as recited in claim 1, wherein the graphical user interface includes an applet.
8. The method as recited in claim 1, wherein the graphical user interface is displayed in response to the selection of a uniform resource locator.
9. The method as recited in claim 8, wherein the uniform resource locator is included in an electronic mail message sent to the user.
10. The method as recited in claim 9, wherein the electronic mail message including the uniform resource locator is sent to the user in response to the



submission by the user of an electronic mail message determined to be unwanted.

11. A computer program product for detecting an unwanted electronic mail message, comprising:

computer code for receiving user input via a graphical user interface, the user input including indicators of unwanted electronic mail messages, wherein the indicator for a particular unwanted message includes at least one of a URL, a sender, and domain of a sender, the graphical user interface further including a window for displaying to a user all of the text of the entire particular unwanted message and permitting the user to highlight text of the particular unwanted message in the window, a menu including the highlighted text and a list of a plurality of measurements for selecting at least one of the measurements to apply to the highlighted text, and a button for adding the selected measurements to the indicators, wherein the measurements each correspond to a unique specific condition associated with the highlighted text that must be met before an electronic mail message is to be classified as unwanted;

computer code for storing the user input indicators in a database;

computer code for receiving an electronic mail message prior to delivery of the electronic mail message to an intended recipient of the electronic mail message;

computer code for analyzing the electronic mail message using the user input indicators stored in the database;

computer code for classifying the electronic mail message as unwanted, possibly unwanted, and wanted based on the analysis using the user input indicators stored in the database;

computer code for sending the electronic mail message to the intended recipient if the electronic mail message is not determined to be unwanted; and

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computer code for selecting a disposition of the electronic mail message if the electronic mail message is determined to be unwanted, the disposition selected from the group consisting of not delivering the electronic mail message to the intended recipient, sending the electronic mail message to an administrator, and sending the electronic mail message to a quarantine.

12. A method for detecting an unwanted electronic mail message, comprising: receiving user input via a graphical user interface, the user input including indicators of unwanted electronic mail messages, wherein the indicator for a particular unwanted message includes at least one of a URL, a sender, and domain of a sender, the graphical user interface further including a window for displaying to a user all of the text of the entire particular unwanted message and permitting the user to highlight text of the particular unwanted message in the window, a menu including the highlighted text and a list of a plurality of measurements for selecting at least one of the measurements to apply to the highlighted text, and a button for adding the selected measurements to the indicators, wherein the measurements each correspond to a unique specific condition associated with the highlighted text that must be met before an electronic mail message is to be classified as unwanted, the graphical user interface further adapted to allow the user to review the measurements, the measurements to apply to the highlighted text being selected from the menu utilizing a right-click action of a mouse, the measurements including the existence of a plurality of instances of the highlighted text, a count of the number of instances of the highlighted text, a ratio of the highlighted text with respect to a total number of words, the graphical user interface including an applet displayed in response to the selection of a uniform resource locator included in an electronic mail message sent to the user in response to the submission

by the user of an electronic mail message determined to be unwanted;  
the user input being encrypted at least in part;  
storing the user input indicators in a database;  
receiving an electronic mail message prior to delivery of the electronic mail  
message to an intended recipient of the electronic mail message;  
analyzing the electronic mail message using the user input indicators stored in  
the database;  
analyzing the electronic mail message using data collected from a public  
archive of known unwanted messages;  
analyzing the electronic mail message using a neural network engine by:  
gathering statistics associated with the text using a statistical analyzer  
by analyzing a character type including Unicode,  
teaching the neural network engine coupled to the statistical analyzer  
to recognize unwanted messages based on statistical indicators,  
wherein the teaching of the neural network engine includes  
identifying a message as an unwanted message, the features of  
the message that make the message unwanted are identified,  
and the identified features are stored and used by the neural  
network engine to identify subsequent unwanted messages,  
wherein the unwanted messages are each expressed as a vector  
with a plurality of variables selected from the group consisting  
of capitals, punctuation, and dollars from a statistics table, and  
analyzing the statistical indicators utilizing the neural network engine,  
classifying the electronic mail message as unwanted, possibly unwanted, and  
wanted based on the analysis using the user input indicators stored in  
the database, the analysis using data collected from an archive of  
known unwanted messages, and the analysis using the neural network  
engine;  
sending the electronic mail message to the intended recipient if the electronic  
mail message is not determined to be unwanted;

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selecting a disposition of the electronic mail message if the electronic mail message is determined to be unwanted, the disposition selected from the group including not delivering the electronic mail message to the intended recipient, sending the electronic mail message to an administrator, and sending the electronic mail message to a quarantine; and  
allowing configuration of analysis parameters while simultaneously performing the analyses.

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